

**AMENDMENTS TO THE CLAIMS**

This listing of claims will replace all prior versions including the listing of claims in the application.

**Listing of claims:**

1 - 41 (Cancelled)

42. (Currently Amended) A method comprising:

when designing an analog and mixed signal integrated circuit, selecting one of a library of pre-defined transmission line topologies for critical interconnect lines of said integrated circuit.

43. (Currently Amended) An integrated circuit design library comprising:

a set of transmission line topologies for critical interconnect lines of an integrated circuit capable of carrying analog and mixed signals, which topologies comprise return paths therein; and

a set of parametrized, equivalent RLC ladder networks, one per topology.

44. (Currently Amended) The library method according to claim [[42]] 43 and also comprising means for performing both frequency and time domain analysis for each transmission line placed into an integrated circuit design.

45. (Previously Presented) The library according to claim 43 and wherein at least an inductance parameter of each said transmission line topology is a function of frequency

46. (Previously Presented) The method according to claim 42 and wherein at least an inductance parameter of each transmission line topology is a function of frequency.

47. (Previously Presented) The library according to claim 45 and wherein said frequency ranges from DC to a transistor cut-off frequency.

48. (Previously Presented) The method according to claim 46 and wherein said frequency ranges from DC to a transistor cut-off frequency.